of its presence being afforded by the colour of its integument, which retains in many cases a normal appearance; whereas in others the growth of the tumour not infrequently excites inflammation of the skin covering it, and the underlying cellular tissue may become the seat of an abscess. The evacuation of pus by incision from either of these situations is not followed by reduction of the inflammatory state, the tumour apparently acting as a foreign body, for on its removal all irritation soon subsides. In a few cases complaint is made that the vision is dim, which disappears on removal of the substance; in some there is pain with a sense of weight, on account of which surgical aid is sought. The tarsal tumour sometimes disappears by absorption, independently of treatment of any kind. Its tendency is to soften, evidence of which is afforded by the appearance of a dark mark of irregular outline on the conjunctival side of the swelling; and if not interfered with, this part ulcerates, the jelly-like contents escape, and a rather hard button-shaped granulation results, which by friction on the eyeball may occasion much pain and inconvenience.

In a case recently under my care at the Eye Hospital the tumour, which had not softened, bled when sliced as freely as if it had been a nævus. If the removal of the tumour is decided upon prior to softening having taken place, the whole of the disease should be excised, or the cure will not be complete, and reproduction be almost certain. And where the growth has invaded the free border of the tarsus it must be removed by the knife, care being taken that the notch in the cartilage does not implicate the skin. Large tumours in a state of inflammation involving the integument are most conveniently treated by excision externally. Where softening has been evident, I have sometimes trephined the conjunctival aspect of the growth, but it is more painful than a crucial incision. The application of solid nitrate of silver to the walls of the emptied cyst I hold to be a barbarism altogether unnecessary, and often occasioning much suffering and loss of time to the patient.

Birmingham.

NECROSIS OF LUMBAR VERTEBRA OF OBSCURE ORIGIN; RAPIDLY FATAL RESULT.

BY JAMES Y. TOTHERICK, M.D.,
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ON Sunday, March 22nd, I was sent for by Mr. Cooke of Tettenhall, to see with him a young gentleman, aged fifteen, who had been complaining for some days of symptoms which were difficult to understand. On the Wednesday preceding he had called on Mr. Cooke, stating that he had a pain in the stomach, but not looking particularly ill, and doing his school work as usual. On the next day, not feeling so well, he kept his bed, and Mr. Cooke saw him. He then complained of severe pain in the back, which was tender to the touch, and in the abdomen, which was distended. His temperature was raised and his pulse quickened. He was very closely questioned as to whether he had had any accident or injury, but steadily maintained that he had not. Nor could it be made out that he had eaten anything injurious, the only questionable thing having been some preserved plum-pudding the previous Sunday. These symptoms—the abdominal distension and pain and the tenderness in the dorsal region—continued and increased, with a temperature which had risen to 102·5°, and a pulse of 100, until the Sunday afternoon when I saw him. At this time the patient was restless, flushed, moaning with pain, impatient of being touched anywhere, but shouted on any attempt being made to handle the greatly distended abdomen, or the back in the lower dorsal region, and for about three inches on each side of the spinal column. Temperature 102°; pulse 100; respiration 22. Six leeches had been applied to the back, and had given some temporary relief, but it was evident that the general progress of the case was rapidly down-hill. The bowels had been opened both by castor oil and enema, and there had only been a little sickness once. The urine was normal. Six leeches were again ordered, and opium was given to relieve the pain and the distension, which were thought to be due to peritonitis. Next day the condition was much the same; the symptoms perhaps somewhat relieved, but the general condition not improved. In view of what we considered to be the condition of peritonitis without any obvious cause, we thought that a surgical consultation was advisable, and the same day Mr. Vincent Jackson saw the case with us. He, however, declined to interfere by any surgical exploration, not considering such a step justifiable by the history or state of the case. The temperature had risen to 102·5°. The patient was somewhat delirious, loudly complaining if handled or moved in any way. For the next two days there was no material alteration in the symptoms. The temperature had once risen to 103°, but on the Thursday had come down to 100°, and the tympanites and most of the tenderness over the abdomen had disappeared. The bowels opened naturally. Urine had to be drawn off by catheter night and morning. About this time appeared some swelling and tenderness in the left elbow, and the next day a red and painful swelling in the first two knuckles of the left hand, and in each place there was fluctuation. It was now evident that we had to do with a case resembling pyæmia, but what had given rise to it was not manifest. The boy was, however, put upon pretty frequent five-grain doses of quinine and some stimulants, with apparent temporary relief; but the temperature again rising very rapidly, the cold pack was employed, with the effect of keeping the temperature quite manageable. The stupor, however, increased, and early on the Sunday morning he died quietly.

Autopsy, forty-four hours after death.—Cadaveric rigidity only in lower limbs. Red staining and leech marks on back. Abdomen distended and of a blue colour. Head: Cerebral membranes healthy; veins fuller on right side than left; brain itself normal. Thorax: Left pleural cavity contained seven ounces of turbid serum; left pleura covered with a thick layer of recent plastic lymph making the lung adherent; right lung also adherent but less markedly so; pericardium healthy; partly decolourised clots in both ventricles; heart itself healthy. In the upper lobe of the left lung were numerous small white lobules, some of which contained liquid pus. The lower lobe was collapsed but floated in water. The right lung was crepitant in the upper lobe, but on the free edge were four wedge-shaped consolidated patches dark in colour, and in these patches were small areas of softening. The rest of the lung substance was emphysematous in the upper lobe. In the middle lobe were similar patches of consolidation with areas of softening. The lower lobe was almost solid, yellowish soft patches being scattered through its substance, some purulent and some apparently caseating. Spleen healthy. Liver: Pale, soft, and large; in one spot was a collection of pus about the size of a shot. Kidneys: Soft in texture, of the usual size, and rather dark in colour. Intestines and peritoneum: Both healthy, with some post-mortem staining. In the first and second carpo-phalangeal joints of the left hand were collections of thick pus, extending from inside the joints and forming abscesses outside. On opening a slight swelling of the left elbow-joint a collection of pus was also found infiltrating the joint. On turning over the body and cutting through the spinal muscles pus welled up in large quantities. The periosteum of the spinal canal was intensely inflamed, and the canal external to the cord was filled with pus, which was also infiltrated amongst the spinal muscles; but the visceral surface of the membranes of the cord was free from inflammation and healthy. On examination of the vertebræ, the body of the first lumbar was found to be quite soft and infiltrated with pus, presenting internally a marked contrast with the vertebra above it and the one below, both of which were hard and of a dark livid colour.

Remarks.—Here was a strong, robust, healthy lad, one of twins, with a good family history, suddenly and without ascertainable cause taken with a fatal illness which must apparently have begun in acute inflammation of the body of the first lumbar vertebra, and presenting in a few hours all the symptoms of acute peritonitis, without, indeed, much constipation or sickness, but with great distension and extreme tenderness. The post-mortem examination revealed a large quantity of pus, infiltrated amongst the deep muscles of the loins; but during life the most careful examinations only produced extreme pain without any feeling of fluctuation. The changes in the lungs were also quite a revelation, as during life the breathing, beyond being a little hurried, was only slightly affected, and only a few mucous râles were audible on auscultation except on the last day, when some dulness was discernible. The post-mortem examination, which was performed by Dr. Dingley of the

Wolverhampton Hospital, was a most tedious business, and the nature of the case was only got at by carefully tracing the various lesions up to their fountain head. And even now the origin of the disease is a mystery. What caused the acute necrosis of the lumbar vertebra? There is no history of a blow or of a sprain, or even of a strumous tendency. I must content myself with putting it on record as a curious case, having no theory to advance which will satisfactorily explain its origin.

Wolverhampton.

CASE OF

SUCCESSFUL OPERATION FOR EXTROVERSION OF THE BLADDER IN A FEMALE.

BY J. GREIG SMITH, M.A., F.R.S.E.,
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THE patient, a weakly peevish child, three years old, was sent to the Bristol Royal Infirmary in October, 1884, to be operated upon for extroverted bladder. The deformity presented no special features. The gap arising from deficiency of the pubic bones was about an inch in breadth, and the recti muscles were correspondingly separated below. The tumour was about the size of a pigeon's egg, red and angry-looking, covered with vascular papillæ on its lower aspect, exquisitely tender to the touch, and discharging large quantities of ropy purulent mucus. It overlapped and concealed the openings of the ureters. Running down from the tumour was a deep groove overlying a rudimentary vagina, into which a probe could be introduced for an inch. No uterus was felt. The labia majora were over-developed, but the labia minora were enormously hypertrophied from constant irritation by the dribbling urine. The rectum prolapsed at every action of the bowels to a distance varying from one to four inches; occasionally it extended half way down the thigh.

I began the operation with the intention of converting the rudimentary vagina into a urethra, but the child lost so much blood from the excessive vascularity of the parts cut that she had to be removed from the operating table before this was completed. And when, at the second operation, I saw my way to provide a sufficiently long artificial urethra by other means, I thought it wiser to leave the vagina to develop whatever potential capacity it might possess. The operation I began by cutting off the nymphæ. The first one, removed by one cut of the scissors, bled from its stump at innumerable points in a manner that was almost alarming. A Pean's forceps grasped the base of the second before it was removed, and was left hanging there till the rest of the operation was completed. The next step was to turn the extroverted bladder inwards, and keep it in position by a piece of firm sponge cut to shape, and insinuated under the overlapping abdominal rim. A flap, in shape corresponding to the gap in the abdominal wall, and a little larger in size, with a small peak or projection at its upper margin, intended to be united to an opening in the upper surface of the vagina, was now dissected off the middle line, just above the tumour. Catch forceps were placed on the numerous bleeding points, and left hanging there. Starting from the middle of the incision for the abdominal flap on each side, and closely skirting the abdominal opening, two lateral flaps were now dissected up. Their bases were in the vascular and distensile tissue of the labia majora. The sponge was now removed, and the abdominal flap, turned on its face over the extroverted bladder, was accurately stitched to the raw surfaces round the abdominal opening by means of a continuous catgut suture. Two silver sutures were then carried through—first the outer portion of the lateral flaps, then the outer margins of the abdominal flap, and, lastly, the edge of the abdominal opening. When the free ends of these were pulled tight, the lateral flaps met in the middle line; and, when they were twisted over a piece of rubber tubing, abdominal wall and under and upper flaps were all kept in accurate apposition. Horsehair sutures were now inserted in the middle line between the lateral flaps; above, between the abdominal wall and the ends of these flaps; and at the sides, between the same flaps and the skin in the groin. The whole surface was covered with skin; nothing whatever was left to granulate. At this stage, after three-quarters of an hour, when I intended to finish the urethral part of the operation, the condition of the patient was so bad that I decided to do no more. A catheter was placed in the new bladder, and fixed there by strapping it to the thigh. Under boracic ointment, perfect healing, without any sloughing, took place, and the child was sent home at the end of a month.

When she had regained strength, she was readmitted, in February, 1885, to undergo a second operation. As was expected from the imperfect manner in which the lower opening had been closed, there was some retraction of the flap, and slight exposure of the extroverted mucous membrane at its lowest part when she was standing up. The labia, drawn towards the middle line, provided such a superabundance of tissue that I decided to utilise it in making a urethra instead of the vagina. Two incisions, about one-fourth of an inch apart, were made along the sides of the groove, which represented the unclosed urethra; these were carried round the small opening from which the bladder protruded. The inner margins of these incisions were united with continuous catgut suture over a catheter placed in the bladder and laid in the groove. The labia, separated for a little way on each side, were united over all with three harelip pins and two shoemaker's stitches of silk. A slight urinary fistula appeared at the upper end of the wounds, which closed in a month of its own accord; with this exception the whole united by first intention. The result has been a complete closure of the extroverted bladder, with an artificial urethra at least an inch long. The cavity is too small to permit of retention of urine for any length of time; as the patient gets older and the parts increaze in size, it is just possible that some power of retain the urine may develop. It is not likely, however, that she will ever be able to dispense with the use of a rubber urinal, which she now wears.

This is the third case on which I have operated for extroversion of the bladder. The other two were on males,[1] and in each of these a complete success was got after one operation. The operative details were essentially identical, and need not be again dwelt upon. I would merely call attention to what I consider the most important steps in the operation; these are the manner in which the lower flap is accurately sutured to the edges of the abdominal opening, and the means of securing, by silver loops over rubber tubing, permanent and accurate apposition of flaps to each other, and to the abdominal walls at the periphery of the opening.

Clifton.

ON THE

SECONDARY NATURE OF MONOCULAR RELIEF.

BY BRIGADE SURGEON T. OUGHTON, A.M.D.

EVERY student of sensorial philosophy will admit that the subject of monocular relief is unmatched for delicacy, complication, and intelligent interest. Granting that the visual sense is comprised *in toto* of a primary sensory function, how can it possibly happen that relievo perceptions may be evolved from a single retinal plane of delineation? The perception consists of more or less coloured points that are related to each other in point of distance, some nearer and some more remote, with an unerring conformity to law and order; so much is patent to observation, whether it be a diagram, a picture, or surrounding objects that are viewed with a single eye. Carpenter has explained the process as one of constructive imagination, analogous to the faculty of novel-writing. Truly the authors of light literature may or may not arrange their incidents with consummate art and order; but, after all, their creations are mere ideations, instead of being actually objective and unmodifiable within certain limits. Again, the constructive imagination fails when a picture or diagram is viewed binocularly, notwithstanding all the elements of the imaginative construction persist as causative factors. Brewster translates the phenomenon as a mental illusion that is effected by chiaroscuro, although he does not seem to have accounted for properly shaded pictures being seen without relief by both eyes, or that the manifestation presents itself unmodified in diagrams and outline sketches (bereft of shadow) when viewed by one eye. The outstanding diffi-

[1] British Medical Journal, Feb. 7th, 1880.